

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Complete if Known		
				Application Number	10/585,559	
				Filing Date	March 5, 2008	
				First Named Inventor	EL OUAIR	
				Art Unit	2628	
				Examiner Name	Not Yet Assigned	
Sheet	1	of	23	Attorney Docket Number		3103.04WOUS

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document
		Number-Kind Code <sup>2</sup> (if known)		
		US- 1,818,331	08-1931	Jakosky
		US- 2,077,707	04-1937	Melton
		US- 2,139,460	12-1938	Potapenko
		US- 2,268,106	12-1941	Blau
		US- 2,426,918	09-1947	Barret
		US- 2,531,088	11-1950	Thompson
		US- 2,766,422	10-1956	Carbonetto
		US- 2,907,389	10-1959	Hitzman
		US- 2,919,397	12-1959	Morley
		US- 2,953,742	09-1960	Herbold
		US- 2003/0048105	03-2003	Ellingsrud et al.
		US- 2003/0052685	03-2003	Ellingsrud et al.
		US- 2003/050759	03-2003	Srnka Leonard et al.
		US- 2004/0000912	01-2004	Conti et al.
		US- 2004/0003511	01-2004	Silver
		US- 2004/0017137	01-2004	Straub
		US- 2004/0027130	02-2004	Ellingsrud et al.
		US- 2004/0090234	05-2004	Macune
		US- 2004/0176910	09-2004	Ellingsrud et al.
		US- 2004/083898	09-2004	Eidesmo et al.

## FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		EP 0087271	08-1983	Geonics Ltd.	
		EP 0215695	03-1987	Blanpain et al.	
		EP 0219234	04-1987	Mobil Oil Corp	
		EP 0368762	05-1990	Societe Prospection Electrique Schlumberger	

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		US- 2005/0035696	02-2005	Parise et al.
		US- 2005/0040742	02-2005	Tsai
		US- 2006/0202697	09-2006	Sodal
		US- 2005/264294	12-2005	Constable
		US- 2006/005965	01-2006	Chouzenoux et al.
		US- 2006/0103387	05-2006	Amundsen
		US- 2007/0150201	06-2007	Eidesmo et al.
		US- 2007/0294036	12-2007	Strack et al.
		US- 2008/0065330	03-2008	Rosten et al.
		US- 2008/0122444	05-2008	Schaug-Pettersen et al.
		US- 2008/0169817	07-2008	Morrison et al.
		US- 2008/0221795	09-2008	Amundsen et al.
		US- 2009/0265111	10-2009	Helwig et al.
		US- 2009/0134877	05-2009	Schaug-Pettersen
		US- 2010/0052688	03-2010	Schaug-Pettersen
		US- 2010/0045295	02-2010	Mittet et al.
		US- 2010/0057363	03-2010	Amundsen

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		EP 0481886	04-1992	Martinez	
		EP 0512756	11-1991	Exxon	
		EP 0568612	03-1996	Sorensen	
		EP 0814349	12-1997	Anadrill Int.	

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		Number-Kind Code <sup>2</sup> (if known)		
		US- 2010/0061187	03-2010	Sodal
		US- 3,052,836	09-1962	Postma
		US- 3,105,014	09-1963	Harrison
		US- 3,114,875	12-1963	Haagensen
		US- 3,182,250	05-1965	Conti et al.
		US- 3,332,487	07-1967	Jones
		US- 3,398,356	08-1968	Still
		US- 3,548,299	12-1970	Duroux et al.
		US- 3,763,419	10-1973	Barringer
		US- 3,806,795	04-1974	Morey
		US- 3,819,246	06-1974	List
		US- 3,836,960	09-1974	Gehman et al.
		US- 3,959,721	05-1976	Roschuk et al.
		US- 3,990,123	04-1992	Martinez
		US- 4,010,413	03-1977	Daniel
		US- 4,041,372	08-1977	Miller et al.
		US- 4,047,098	09-1977	Duroux
		US- 4,077,686	03-1978	Bukaitz
		US- 4,079,309	03-1978	Seeley

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		EP 1253437	10-2002	Matorana	
		EP 1256019	06-2004	Statoil ASA	

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		US- 4,094,304	06-1978	Wright Jr.
		US- 4,168,484	09-1979	Wright Jr.
		US- 4,218,678	09-1980	Fowler et al.
		US- 4,229,809	10-1980	Schwalbe
		US- 4,245,191	01-1981	Schroeder
		US- 4,258,321	03-1981	Neale, Jr.
		US- 4,258,322	03-1981	Rocroi et al.
		US- 4,283,099	08-1981	Burton
		US- 4,296,379	10-1981	Yoshizumi
		US- 4,298,840	11-1981	Bischoff et al.
		US- 4,308,499	12-1981	Thierbach et al.
		US- 4,396,885	08-1983	Constant
		US- 4,417,210	11-1983	Rocroi et al.
		US- 4,446,434	05-1984	Sternberg et al.
		US- 4,451,789	05-1984	Meador
		US- 4,456,067	06-1984	Pinner
		US- 4,489,276	12-1984	Yu
		US- 4,492,924	01-1985	Nilsson
		US- 4,494,805	01-1985	Washburn

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		EP 1309887	03-2004	Ellingsrud et al.	
		EP 1512033	12-2003	University of California	
		FR 2479992	10-1981	Duroux	
		FR 2586302	02-1987	Blanpain et al.	
		GB 1342475	01-1974	Russell	
		GB 1588495	04-1981	Shell Internationale	

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		US- 4,500,146	02-1985	Peterson
		US- 4,506,225	03-1985	Loveless et al.
		US- 4,506,225	05-1985	Peynaud et al.
		US- 4,547,733	10-1985	Thoraval
		US- 4,583,095	04-1986	Peterson
		US- 4,594,551	06-1986	Cox et al.
		US- 4,616,184	10-1986	Lee et al.
		US- 4,617,518	10-1986	Srnka
		US- 4,633,182	10-1986	Dzwinel
		US- 4,652,829	03-1987	Safinya
		US- 4,660,645	04-1987	Newlove
		US- 4,677,438	06-1987	Michiguchi et al.
		US- 4,760,340	07-1988	Denzau et al.
		US- 4,791, 998	12-1988	Hempkins et al.
		US- 4,793,664	12-1988	Jackson
		US- 4,835,473	05-1989	Bostick Jr.
		US- 4,835,474	05-1989	Parra et al.
		US- 4,906,575	03-1990	Silver et al.

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		GB 188676	12-1922	Alexander George	
		GB 2089043	06-1982	Roberts	
		GB 2155182	09-1985	Exxon	
		GB 2197952	06-1988	Glasgow	
		GB 2197078	05-1988	Flowerdew et al.	
		GB 220070	12-1989	Flowerdew	

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		US- 4,926,394	05-1990	Doyen
		US- 4,957,172	09-1990	Patton et al.
		US- 4,986,354	01-1991	Cantu
		US- 4,992,995	02-1991	Favret
		US- 5,025,218	06-1991	Ramstedt
		US- 5,032,794	07-1991	Ridd et al.
		US- 5,039,179	08-1991	Chouzenoux
		US- 5,043,667	08-1991	Schofield
		US- 5,066,916	11-1991	Rau
		US- 5,103,920	04-1992	Patton et al.
		US- 5,170,440	12-1992	Cox
		US- 5,177,445	01-1993	Cross
		US- 5,185,578	02-1993	Stolarczyk
		US- 5,192,952	03-1993	Johler
		US- 5,219,386	06-1993	Kletzmaier et al.
		US- 5,280,284	01-1994	Johler
		US- 5,357,253	10-1994	Van Etten et al.
		US- 5,369,892	12-1994	Dhaemers

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		GB 2220071	12-1989	Radiodetection Limited	
		GB 2256715	12-1992	Baker Hughes Inc.	
		GB 2296567	07-1996	Geco AS	
		GB 2231602	11-1990	Sheehy	
		GB 2301902	12-1996	Baker Hughes Inc.	

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		US- 5,373,443	12-1994	Lee et al.
		US- 5,400,030	03-1995	Duren et al.
		US- 5,421,646	06-1995	McNamara et al.
		US- 5,444,619	08-1995	Hoskins et al.
		US- 5,486,764	01-1996	Thompson et al.
		US- 5,563,513	10-1996	Tasci
		US- 5,564,806	10-1996	Keisling et al.
		US- 5,581,024	12-1996	Meyer Jr. et al.
		US- 5,689,068	11-1997	Locatelli et al.
		US- 5,690,401	11-1997	Franklin
		US- 5,704,142	11-1998	Stump
		US- 5,724,309	03-1998	Higgs et al.
		US- 5,767,679	06-1998	Schroder
		US- 5,770,945	06-1998	Constable
		US- 5,777,478	07-1998	Jackson
		US- 5,811,973	09-1998	Meyer, Jr.
		US- 5,825,188	10-1998	Montgomery et al.
		US- 5,838,634	11-1998	Jones

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		GB 2333364	07-1999	Geco AS	
		GB 2355538	04-2001	Norske Stats	
		GB 2364390	01-2002	Haj-Yousef	
		GB 2382875	07-2001	Univ.South Hampton	
		GB 2384068	07-2003	Westerngeco Ltd.	
		GB 2385923	09-2003	Statoil ASA	

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Complete if Known	
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				Filing Date	March 5, 2008
				First Named Inventor	EL OUAIR
				Art Unit	2628
				Examiner Name	Not Yet Assigned
Sheet	8	of	23	Attorney Docket Number	3103.04WOUS

## U.S. PATENT DOCUMENTS

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		Number-Kind Code <sup>2</sup> (if known)		
		US- 5,841,280	11-1998	Yu et al.
		US- 5,877,995	03-1999	Thompson et al.
		US- 5,886,526	03-1999	Wu
		US- 5,892,361	04-1999	Meyer, Jr. et al.
		US- 5,894,450	04-1999	Schmidt et al.
		US- 5,901,795	05-1999	Tsao et al.
		US- 5,905,657	05-1999	Celniker
		US- 5,940,777	08-1999	Keskes
		US- 5,955,884	09-1999	Payton et al.
		US- 5,987,388	11-1999	Crawford et al.
		US- 5,996,414	12-1999	Mercado
		US- 6,002,357	12-1999	Redfern et al.
		US- 6,005,916	12-1999	Johnson et al.
		US- 6,011,557	01-2000	Keskes et al.
		US- 6,023,168	02-2000	Minerbo
		US- 6,026,913	02-2000	Mandal et al.
		US- 6,049,760	04-2000	Scott
		US- 6,060,884	05-2000	Meyer Jr. et al.

## FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		GB 2390904	01-2004	MacGregor et al.	
		GB 2391946	02-2004	Schlumberger Holdings	
		GB 2395563	05-2004	MacGregor et al.	
		GB 2399640	09-2004	Eidesmo et al.	
		GB 2404444	02-2005	Sodal	
		GB 2411006	08-2005	MacGregor et al.	

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		US- 6,060,885	05-2000	Tabarovsky et al.
		US- 6,061,412	05-2000	Stucker et al.
		US- 6,087,833	08-2000	Jackson
		US- 6,101,448	08-2000	Ikelle et al.
		US- 6,108,605	08-2000	Doyle et al.
		US- 6,114,972	09-2000	Smith
		US- 6,140,819	10-2000	Peterman et al.
		US- 6,157,195	12-2000	Vail, III
		US- 6,163,155	12-2000	Bittar
		US- 6,181,138	01-2001	Hagiwara et al.
		US- 6,184,685	02-2001	Paulk et al.
		US- 6,188,221	07-2001	Van de Kop et al.
		US- 6,188,222	02-2001	Seydoux et al.
		US- 6,225,806	05-2001	Millar et al.
		US- 6,236,211	05-2001	Wynn
		US- 6,236,212	05-2001	Wynn
		US- 6,246,240	06-2001	Vail, III
		US- 6,294,917	09-2001	Nichols
		US- 6,339,333	01-2002	Kuo

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		GB 2413187	10-2005	Ellingsrud et al.	
		GB 2413188	10-2005	Ellingsrud et al.	
		GB 2415511	12-2005	Amundsen et al.	
		GB 2421800	07-2006	Svien	
		GB 2425182	10-2006	Schlumberger Holdings	
		JP 2002 244580	08-2002	Murashashi	

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		Number-Kind Code <sup>2</sup> (if known)		
		US- 6,389,360	05-2002	Alft et al.
		US- 6,415,231	07-2002	Herbert
		US- 6,450,599	07-2002	Mamuyac
		US- 6,480,000	11-2002	Kong et al.
		US- 6,499,817	12-2002	Jermain
		US- 6,573,855	06-2003	Hayakawa et al.
		US- 6,628,119	09-2003	Eidesmo et al.
		US- 6,662,147	12-2003	Fournier et al.
		US- 6,696,839	02-2004	Ellingsrud et al.
		US- 6,700,526	03-2004	Witten
		US- 6,717,411	04-2004	Ellingsrud et al.
		US- 6,826,483	11-2004	Anderson et al.
		US- 6,834,732	12-2004	Haarstad
		US- 6,842,006	01-2005	Conti et al.
		US- 6,859,038	02-2005	Ellingsrud et al.
		US- 6,864,684	03-2005	Ellingsrud et al.
		US- 6,900,639	05-2005	Ellingsrud et al.
		US- 6,917,564	07-2005	Leaney
		US- 6,950,786	09-2005	Sonneland et al.

## FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		JP 2006145360	06-2006	Radioactive Waste Man Funding	
		WO 00/00850	01-2000	Den Norske Stats Oljeselskap AS	
		WO 00/13037	03-2000	Osaka Gas Co. Ltd.	
		WO 00/13046	03-2000	Den Norske Stats Oljeselskap AS and Norges Geotekniske Institute	

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		Number-Kind Code <sup>2</sup> (if known)		
		US- 6,950,790	09-2005	Nichols
		US- 7,026,819	04-2006	Eidesmo et al.
		US- 7,028,806	04-2006	Dubinsky et al.
		US- 7,032,707	04-2006	Egerev et al.
		US- 7,038,456	05-2006	Ellingsrud et al.
		US- 7,038,850	05-2006	Chang et al.
		US- 7,095,357	08-2006	Johler
		US- 7,106,065	08-2006	Graf
		US- 7,123,543	10-2006	Vaage et al.
		US- 7,126,338	10-2006	MacGregor et al.
		US- 7,145,341	12-2006	Ellingsrud et al.
		US- 7,149,672	12-2006	Torkildsen
		US- 7,202,669	04-2007	Ellingsrud et al.
		US- 7,319,330	01-2008	Amundsen
		US- 7,423,432	09-2008	Amundsen
		US- 7,471,089	10-2009	Helwig et al.
		US- 7,613,570	11-2009	Rosten et al.
		US- 7,664,603	02-2010	Rosten
		US- D359,403	06-1995	Tisbo et al.
		US- D361,446	08-1995	Acard

## FOREIGN PATENT DOCUMENTS

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		WO 00/54075	09-2000	Profile Technologies Inc.	
		WO 00/63718	10-2000	Flight Refuelling Ltd.	
		WO 01/20366	03-2001	Srnka	
		WO 01/33481	05-2001	Exxon	
		WO 01/42818	06-2004	Eiken et al.	

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		Number-Kind Code <sup>2</sup> (if known)			
		US- D362,767	10-1995	Kelly et al.	
		US- D366,376	01-1996	Tisbo et al.	
		US- D366,577	01-1996	Tisbo et al.	
		USH1490	09-1995	Thompson et al.	
		USH1524	04-1996	Thompson et al.	
		USH1561	07-1996	Thompson	
		US-			
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		WO 01/55749	08-2001	Halliburton Energy Services, Inc.	
		WO 01/57555	08-2001	Den Norske Stats Oljeselskap AS and Norges Geotekniske Institute	
		WO 02/14906	02-2002	Statoil ASA	
		WO 03/034096	04-2003	University of South Hampton	
		WO 03/036331	05-2003	Amundsen et al.	
		WO 03/048812	06-2003	University of South Hampton	
		WO 03/100467	12-2003	Amundsen	
		WO 03/104844	12-2003	Constable	
		WO 2003/042718	05-2003	Witten Technologies Inc.	
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		US-		
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
		WO 2003/048737	06-2003	University John Hopkins	
		WO 2004/053528	06-2004	The Regents of the Univ. CA	
		WO 2007/018810	02-2007	Lu	
		WO 81/01617	06-1981	Boliden Aktiebolag	
		WO 89/10463	11-1989	Alan Sheehy	
		WO 90/00749	01-1990	Zetetic International Ltd.	
		WO 92/13172	08-1992	Sunde	
		WO 92/15771	09-1992	Coleman et al.	
		WO 92/15900	09-1992	Kirsten Nielsen	
		WO 94/20864	09-1994	Ralph Johler	
		WO 96/06367	02-1996	Geo Search Co. Ltd.	
		WO 96/33426	10-1996	Kurt Sorensen	
		WO 96/35859	11-1996		
		WO 97/33184	09-1997	Chevron USA Inc.	
		WO 98/28638	07-1998	Alexandr Zhakferovich Nizamov	
		WO 99/13966	03-1999	Den Norske Stats Oljeselskap AS	

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				Art Unit	2628
				Examiner Name	Not Yet Assigned
Sheet	14	of	23	Attorney Docket Number	3103.04WOUS

## NON PATENT LITERATURE DOCUMENTS

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		"Applications of 3-Dimensional Electromagnetic Induction by Sources in the Ocean", A proposal submitted to MAST III under Area C: Marine Technology, Part 1.	
		"Applications of 3-Dimensional Electromagnetic Induction by Sources in the Ocean", A proposal submitted to MAST III under Area C: Marine Technology, Part 2.	
		0119245.9; GB Search Report dated 05.28.02	
		Barton et al., "LITHOS", Cambridge Advanced Lithological Imaging Project Phase 1: 1998-2001 Sub-basalt Imaging, August 21, 1997.	
		Chave et al., "Controlled Electromagnetic Sources for Measuring Electrical Conductivity Beneath the Oceans 1", Forward Problem and Model Study, J. Geophysical Research, Vol. 87, No. B7, pp. 5327-5338, July 10, 1982.	
		Chave et al., "Some Comments on Seabed Propagation of ULF/ELF Electromagnetic Fields", 25 Radio Science 825-36 (September 1990).	
		Cheesman et al., "On the theory of sea-floor conductivity mapping using transient electromagnetic systems", Geophysica, Vol. 52. No.2. February 1987 pp. 204-217.	
		Constable et al., "Marine controlled-source electromagnetic sounding 2. The PEGASUS experiment" Journal of Geophysical Research. 101.B3 (1996): 5519-5530	
		Constable et al., "Marine Magnetotellurics for petroleum exploration, Part 1: A sea-floor equipment system. Geophysics 63(3) 816-825. (May-June 1998).	
		DAS., "Apparent resistivity curves in controlled-source electromagnetic sounding directly reflecting true resistivities in a layered earth" Vol. 60, No. 1, pp. 53-60 (January -February 1995).	

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/585,559
				Filing Date	March 5, 2008
				First Named Inventor	EL OUAIR
				Art Unit	2628
				Examiner Name	Not Yet Assigned
Sheet	15	of	23	Attorney Docket Number	3103.04WOUS

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		Edwards et al., "Electromagnetic Assessment of Offshore Methane Hydrate Deposits in the Cascadia Margin", MARELEC 99, 1999.	
		Edwards et al., "The Assessment of Marine Gas Hydrates through Electrical Remote Sounding: Hydrate without a BSR", Geophysical Research Letters, Vol. 27, No. 16, pp. 2397-2400, Aug. 15, 2000.	
		Edwards, "On the Resource evaluation of Marine Gas Hydrate Deposits Using Sea-Floor Transient Electric Dipole-Dipole Methods", 62 Geophysics 63-74 (January 1997).	
		EIDESMO et al., "Remote detection of hydrocarbon filled layers using marine controlled source electromagnetic sounding," EAGE 64 <sup>th</sup> Conference & Exhibition - Florence, Italy, 4 pages, May 27-30, 2002.	
		Eidesmo et al., "Sea Bed Logging (SBL), a new method for remote and direct identification of hydrocarbon filled layers in deepwater areas", 20 First Break (March 2002).	
		Ellingsrud et al., "How Electromagnetic Sounding Technique Could be Coming to Hydrocarbon E & P", 20 First Break (March 2002).	
		ELLINGSRUD et al., "Remote sensing of hydrocarbon layers by seabed logging (SBL): Results from a cruise offshore Angola," The Leading Edge, pps. 972-982, October 2002.	
		Evans et al, "Upper Crustal Resistivity Structure of the East-Pacific Rise Near 13 degrees North, Geophysical Research Letters, Vol. 18, No. 10, pp. 1917-1920, Oct. 1991.	
		Evans et al., "On the Electrical Nature of the Axial Melt Zone at 13 degrees North on the East Pacific Rise", Journal of Geophysical Research, Vol. 99, No. B1, pp. 577-588, Jan. 1994.	
		Evans, "Constraints on the Large-Scale Porosity and Permeability Structure of Young Oceanic Crust from Velocity and Resistivity Data, Geophysical Journal International, Vol. 119, pp. 869-879, 1994.	
		Explorations, Scripps Institute of Oceanography, Vol. 4, No. 2, 1997.	

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		Flosadottir et al., "Marine Controlled-Source Electromagnetic Sounding 1. Modeling and Experimental Design", Journal of Geophysical Research, Vol. 101, No. B3, pp. 5507 to 5517, Mar. 10, 1996.			
		Garg et al., "Synthetic Electric Sounding Surveys Over Known Oil Fields", 49 Geophysics 1959-67 (November 1984).			
		Greaves et al., "New Dimensions of Geophysics for Reservoir Monitoring, pp. 141-150.			
		GREER et al., "Remote mapping of hydrocarbon extent using marine Active Source EM Sounding," EAGE 65 <sup>th</sup> Conference & Exhibition – Stavanger, Norway, 4 pages, June 2-5, 2003.			
		Hordt et al., "A First Attempt at Monitoring Underground Gas Storage by Means of Time-lapse Multi-Channel Transient Electromagnetics", Geophysical Prospecting, Vol. 48(3), pp. 489-509, 2000.			
		Hoversten et al., "Maring magnetotellurics for petroleum exploration, Part II: numerical analysis of subsalt resolution. Geophysics 63(3): 826-840 (May-June 1998).			
		International Search Report - PCT/EP2008/050200 dated 11.24.08.			
		International Search Report PCT/EP2005/051480 08.24.05 and Search Report 0407699.8 dated 09.09.04.			
		International Search Report dated 03.28.03 and International Preliminary Examination Report dated 12.09.03 for PCT/GB02/05355.			
		International Search Report dated 12.11.07 for PCT/2007/003484 and Search Reports dated 01.08.07 for GB 0618238.0			
		International Search Report dated 07.28.05 for PCT/EP2005/051483 and GB 0407697.2 dated 09.14.04.			
		International Search Report dated 08.01.05 for PCT/EP2005/051484 and Search Report dated 09.09.04. from GB 0407696.4			
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		International Search Report dated 10.13.04 for PCT/GB2004/003267 and Search Report dated 11.10.04 for GB0317649.2.			
		International Search Report dated 03.14.06 for PCT/GB2005/000282 and GB 0502064.9 dated 05.24.05.			
		International Search Report dated 02.03.06 for PCT/GB2005/004626 and GB 0426505.4 dated 04.06.05.			
		International Search Report dated 04.17.08 or PCT/GB2007/003464 and Search Reports for GB 0618240.6 dated 01.22.07 and 03.22.07.			
		International Search Report dated 12.09.08 for PCT/GB2007/003880 and Search Reports for GB 0620328.5 dated 05.18.07 and 01.26.07.			
		International Search Report dated 08.30.05 PCT/EP2005/052781 and Search Report GB0414373.1 dated 10.14.04.			
		ISR dated 03.05.09, Written Opinion, Preliminary Report on Patentability for PCT/GB2007/002138 and Search Report GB 0611497.9 dated 10.17.07.			
		Kaufman et al., "Marine Electromagnetic Prospecting System", 1981 Annual Meeting. Abstracts. 1 page.			
		Kaufman et al., "EM Field of an Electric Dipole on the Surface of a Medium Containing a Thin Resistant Layer", Frequency and Transient Soundings, publ. Elsevier, (1983).			
		LITHOS Cambridge advanced lithological imaging project. August 21, 1997.			
		MacGregor et al. "Use of Marine Controlled Source Electromagnetic Sounding for sub-basalt exploration" EAGE 61st conference and Technical Exhibition, 4-08. Finland. June 1999.			
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		MacGregor et al., "Marine Controlled Source Electromagnetic Sounding: Development of a Regularized Inversion for 2-Dimensional Resistivity Structures", 1 LITHOS Science Report 103-109 (April 1999).	
		MacGregor et al., "Marine Controlled Source Electromagnetism: Effect of Source-Receiver Geometry on the Response of 1-D models", 1996.	
		MacGregor et al., "The RAMESSES Experiment - III. Controlled-Source Electromagnetic Sounding of the Reykjanes Ridge", 135 Geophys. J. Int. 773-89 (July 1998).	
		MacGregor et al., Electrical resistivity structure of the Valu Fa Ridge, Lau Bain, from marine controlled-source electromagnetic sounding", Geophysical Journal International. 146.1 (2001): 217-236.	
		MacGregor, "Electromagnetic Investigation of the Reykjanes Ridge Near 58° North", PhD Thesis, University of Cambridge.	
		MACGREGOR, "Joint analysis of marine active and passive source EM data for sub-salt or sub-basalt imaging," EAGE 65 <sup>th</sup> Conference & Exhibition - Stavanger, Norway, 4 pages, June 2-5, 2003.	
		MITTET, R., et al., "Inversion of SBL data acquired in shallow waters," paper presented at EAGE 66th Conference & Exhibition, 5 pgs., (June 6-10, 2004).	
		MITTET, Rune, et al., "On the orientation and absolute phase of marine CSEM receivers, Geophysics, Vol. 72 No. 4 pp. F145-F155 (July-August 2007).	
		Nekut et al., "Petroleum Exploration Using Controlled Source Electromagnetic, Methods", Proceedings of the IEEE, Vol. 77(2), pp. 338-362, 1989.	

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		Opderbecker, "At-Sea Calibration of a USBL Underwater Vehicle Positioning System, Oceans 97 Conference Proceedings Halifax, NS, Canada, MTS/IEEE Vol.1 pp. 721-726 (October 1997)	
		Osen et al., "Removal of water-layer multiples from multicomponenet sea-bottom data. Geophysics. Vol.64, No. 3. pp.838-851. May-June 1999.	
		Peyronnet et al., "POSIDONIA 6000: A New Long Range Highly Accurate Ultra Short Base Line Positioning System" Oceans 98 Conference Proceedings, Nice, France IEEE, Vol. 3, pp. 1721-1727 (September 1998)	
		Preliminary Examination Report - PCT/GB01/03473 mailed 04.24.02.	
		Preliminary Examination Report - PCT/GB99/02823 dated 12.05.00.	
		GB Search Report - PCT/GB 0119245.9 dated 05.28.02	
		Preliminary Examination Report - PCT/GB00/04667 dated 01.29.02.	
		Preliminary Examination Report- PCT/GB99/03039 dated 10.10.00.	
		Roston et al., (2003) A Seabed Logging Calibration Survey over the Ormen Lange Gas Field, EAGE, 65th An. Intern. Mtg. Eur.Assoc.Geosc.Eng.Extended Abstracts P058.	
		Search Report - PCT/GB00/04667 dated 03.09.01	

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		Sinha et al., "An Active Source Electromagnetic Sounding System for Marine Use", Marine Geophysical Researches, 12:59-68, 1990.			
		Sinha et al., "Magmatic Processes at Slow Spreading Ridges: Implications of the RAMESSES Experiment at 57 deg. 45'N on the Mid-Atlantic Ridge," 135 Geophys. J. Int. 731-45 (July 1998).			
		Sinha et al., "Sub-Sea-Floor Imaging for Structural and Lithological Properties Using Controlled Source Electromagnetic (CSEM) Sounding", Abstract for Technology for Deep-Sea Geological Investigations, Developments, Applications and Results, Nov. 11-12, 1998.			
		Sinha., "Controlled Source EM sounding: Survey design considerations for hydrocarbon applications" LITHOS Science Report. 04/1999: 95-101			
		Slob, "Wave field decomposition of full-polarimetric data based on the two-way wave equation," Grounds Penetrating Radar, Proceedings of the 10 <sup>th</sup> Int'l Conference on Delft, The Netherlands, 21-24 June 2004, Vol. 1 pages 315-318 (21 June 2004).			
		Spies, "Recent Developments in the use of Surface Electrical Methods for Oil and Gas Exploration in the Soviet Union", Geophysics, Vol. 48(8), pp. 1102-1112, 1983.			
		Strack et al., "Integrating Long-Offset Transient Electromagnetics (LOTEM) with Seismics in an Exploration Environment", Geophysical Prospecting, Vol. 44, pp. 997-1017, 1996.			
		Unsworth et al., "Electromagnetic Induction by a Finite Electric Dipole Source Over a 2-D Earth", Geophysics, Vol. 58, pp. 198-214, 1993.			
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		Ursin, "Review of elastic and electromagnetic wave propagation in horizontally layered media" Geophysics. Vol. 48, No. 8. pp. 1063-1081. August 1983.	
		Young et al., "Electromagnetic Active Source Sounding Near the East Pacific Rise" Geophysical Research Letters. Vol. 8, No. 10. pp.1043-1046. October 1981	
		Yuan et al., "Electromagnetic Assessment of Offshore Methane Hydrate Deposits on the Cascadia Margin, GP22A-08", American Geophysical Union Fall Meeting, San Francisco, 1998.	
		Yuan et al., "The Assessment of Marine Gas Hydrates Through Electrical Remote Sounding: Hydrate Without a BSR?", 27 Geophys. Res. Letts. 204-217 (August 15, 2000).	
		Application and File History of U.S. Patent No. 6,628,119, issued 09.30.2003, inventor Eidesmo as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No.7,026,819, issued 04.11.2006, inventor Eidesmo.	
		Application and File History of U.S. Application No. 11/287,893, filed 11.28.2005, inventor Eidesmo as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 6,696,839, issued 02.24.2004, inventor Ellingsrud as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 6,864,684, issued 03.08.2005, inventor Ellingsrud as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Application No. 11/585,992, filed 10.24.2006, inventor Ellingsrud as available on PAIR at www.uspto.gov.	
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		Application and File History of U.S. Patent No. 6,717,411, issued 04.06.04, inventor Ellingsrud as available on PAIR at www.uspto.gov.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.F./

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/585,559
				Filing Date	March 5, 2008
				First Named Inventor	EL OUAIR
				Art Unit	2628
				Examiner Name	Not Yet Assigned
Sheet	22	of	23	Attorney Docket Number	3103.04WOUS

## NON PATENT LITERATURE DOCUMENTS

EXAMINER INITIAL <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
		Application and File Histroy of U.S. Patent No. 6,900,639, issued 05.31.2005, inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 7,038,456, issued 05.02.06. inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 7,202,669, issued 04.10.07, inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 7,423,432, issued 09.09.08, inventor Amundsen, as available on PAIR at www.uspto.gov.	
		Application and File Histroy of U.S. Patent No. 7,319,330, issued 01.15.2008, inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Publication No. 2006/0202697, published 09.14..06, inventor Sodal, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Publication No. 2008/0122444, published 05.29.08, inventor Schaug-Pettersen, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Publication No. 2009/0134877, published 05.28.09, inventor Schaug-Pettersen, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 7,126,338, issued 10.24.06, inventor Eidesmo, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Publication No. 2007/0150201, published 06.28.07, inventor Eidesmo, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 6,859,038, issued 02.22.05, inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Patent No. 7,145,341, issued 12.05.06, inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Publication No. 2010/0052688, published 03.04.10, inventors Schaug-Pettersen, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Application No. 12/304,073, filed 03.10.09, inventor Ellingsrud, as available on PAIR at www.uspto.gov.	
		Application and File History of U.S. Application No. 12/441,632, filed 09.24.09, inventor Mittet, as available on PAIR at www.uspto.gov.	

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				Application Number	10/585,559
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EXAMINER INITIAL*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>	
		Application and File History of U.S. Patent No. 7,149,672, issued 12.12.06, inventor Torkildsen, as available on PAIR at www.uspto.gov.		
		Application and File Wrapper of U.S. Patent No. 7,613,570, issued 11.3.09, inventor Rosten, as available on PAIR at www.uspto.gov.		
		Application and File Wrapper of U.S. Patent No. 7,664,603, issued 02.16.10, inventor Rosten, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Publication No. 2008/0065330, published 03.13.08, inventor Rosten, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Publication No. 2008/0221795, 09.11.08, inventor Amundsen, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Publication No. 2010/0057363, published 03.04.10, inventor Amundsen, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Publication No. 2010/0045295, published 02.25.10, inventor Mittet, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Application No. 12/443,189, filed 12.30.09, inventor Ridyard, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Publication No. 2010/0061187, published 03.11.10, inventor Sodal, as available on PAIR at www.uspto.gov.		
		Application and File Wrapper of U.S. Application No. 61/298,582, filed 01.27.10, inventor Perryman, as available on PAIR at www.uspto.gov.		
		Application and File History of U.S. Patent No. 6,834,732, issued 12.28.2004, inventor Haarstad, as available on PAIR at www.uspto.gov.		
EXAMINER SIGNATURE	/Russell Frejd/		DATE CONSIDERED	12/13/2010

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